From:

Dorsey, Nancy

Sent:

Monday, August 11, 2014 9:00 AM

To:

Tyrrell, Timothy;Ben Grunewald;Scott Ausbrooks;austin.holland@ou.edu;Gertson, Rod;Bauer,

Robert A;Linda McDonald;Bates, William;Justin Rubinstein;ROVELLI, BRIAN (GE Global Research);smunews@smu.edu;ccabarcas@bilcorp.com;furnace@bilcorp.com

Research);smunews@smu.edu;ccabarcas@hilcorp.com;furnace@hilcorp.com rex@kgs.ku.edu;Rick.Simmers@dnr.state.oh.us;Dellinger, Philip;Johnson, Ken-E

Cc: Subject:

RE: Call date Seismic Monitoring sub-group Aug 7 at 2CT

Hi Tim,

Yup. It is always easier to start with something than not.

The suggested text covers why induced seismicity is a concern, which applies in part to the larger IOGGC and GWPC study. The goal and parameters of the study were probably covered at the initial meeting, but will certainly be the guide in to what is expected of our subgroup. My thoughts are finding the balance between the extensive information and system in place and providing something useful, when the experts have it pretty well covered.

Nancy

Nancy S. Dorsey
Environmental Scientist
Oklahoma Class II Program Manager
WQ-SG EPA Region 6
1445 Ross Ave. #1200
Dallas, TX 75202-2733
214-665-2294
FAX 214-665-2191

From: Tyrrell, Timothy [mailto:Timothy\_Tyrrell@xtoenergy.com]

Sent: Sunday, August 10, 2014 9:45 AM

To: Ben Grunewald; Scott Ausbrooks; austin.holland@ou.edu; Gertson, Rod; Bauer, Robert A; Linda McDonald; Dorsey,

Nancy; Bates, William; Justin Rubinstein; ROVELLI, BRIAN (GE Global Research); smunews@smu.edu;

ccabarcas@hilcorp.com; furnace@hilcorp.com
Cc: rex@kgs.ku.edu; Rick.Simmers@dnr.state.oh.us

Subject: RE: Call date Seismic Monitoring sub-group Aug 7 at 2CT

All,

After our workgroup call last week I did a little digging to help with the 'as is' with respect to seismic monitoring. The attached ppt pack has some screen captures that may help those of us, like me, who are not as aware of what is out there today. Turns out there is a lot out there already! Seems like our challenge will be how to integrate, not duplicate, those efforts.

During the call, the question of what our objective was came up a couple of times. It's a good question and making that crystal clear will likely help up going forward. I took the liberty of taking a shot at something to shoot at. I'm sure it's wrong, but seems like it's easier to fix once something is down on paper. It's the first page of the ppt file.

Looking forward to working with all of you on this!

Tim Tyrrell XTO Geoscience Technical Manager 817-885-3742 Office 713-702-3267 Cell

From: Ben Grunewald [mailto:ben@gwpc.org]
Sent: Wednesday, August 06, 2014 9:27 AM

**To:** Scott Ausbrooks; <u>austin.holland@ou.edu</u>; Gertson, Rod; Bauer, Robert A; Tyrrell, Timothy; Linda McDonald; <u>Dorsey.Nancy@epa.gov</u>; Bates, William; Justin Rubinstein; ROVELLI, BRIAN (GE Global Research); smunews@smu.edu;

ccabarcas@hilcorp.com; furnace@hilcorp.com
Cc: rex@kgs.ku.edu; Rick.Simmers@dnr.state.oh.us

Subject: RE: Call date Seismic Monitoring sub-group Aug 7 at 2CT

Friendly reminder for the upcoming call--

Review of the issues regarding seismic monitoring - SUBGROUP

The call will be on Thursday, August 7th at 2:00 pm CT.

To join the call, please dial 1 866 777 6650 code 405 516 4974

## August 7, 2014 Conference Call

## **GWPC Induced Seismicity Working Group Review of:**

Issues Regarding Seismic Monitoring of Earthquakes Associated with Oil and Gas Activities

- 1. Define the necessity of Monitoring ie. Why Bother?
- 2. Describe a minimum suite of sensors and data acquisition, what kind, areal coverage needed, etc.
- 3. Discuss the current status of Monitoring Capability, ie. Permanent Stations, deployable arrays, detection threshold, etc.
- 4. Share success stories and Frustrations.
- 5. Discuss possible solutions, including sources of funding, organizations to task with response, maintenance of response readiness, data repository development and maintenance, etc.
- 6. Decide what our next steps are.

THANKS –Ben 405 516 4972

Review of the issues regarding seismic monitoring - Craig Pearson (TX) lead

	Thursday
	August 7 2:00 pm CT
Scott Ausbrooks (AR, GS)	Yes

Austin Holland (OK GS)	Yes
Rod Gertson (Devon Energy)	Yes
Bob Bauer (IL Geological Survey)	No
Tim Tyrrell (XTO)	Yes
Linda McDonald (SandRidge Energy)	Yes
Carlos Cabarcas (Hilcorp)	V-2 10
Nancy Dorsey (USEPA R-6)	Yes
Bill Bates (EPA HQ)	Yes
Justin Rubinstein (USGS)	No
Brian Rovelli (GE – OGTC)	Yes
Brian Stump (SMU)	Yes
Craig Pearson (TX, O&G)	Yes
	2
Ben Grunewald (GWPC)	Yes
Mike Paque (GWPC)	
Gerry Baker (IOGCC)	